

**Maine Department of Transportation
Qualified Products List of**

Chemical Anchoring Materials

PLEASE READ FHWA's [TECHNICAL ADVISORY: T 5140.30](#) "USE AND INSPECTION OF ADHESIVE ANCHORS IN FEDERAL-AID PROJECTS" BEFORE SELECTING ANY ANCHORING MATERIAL FROM THIS LIST.

EPOXY ANCHORING MATERIALS MEETING THE REQUIREMENTS OF AASHTO M235, Type IV see each product for Grade and Class information					
Product Name	Grade [1]	Class [2]	Cartridges	Bulk Containers	Minimum Temp.(°F)
Adhesives Technology Corp - Pompano Beach, FL - (800) 892-1880					
Ultrabond 1	3	A,B,C	•	•	35
Ultrabond 2	N/A	N/A	•	CALL	40
Ultrabond 4CC	3	C	•	N/A	70
Ultrabond HS-200	3	A,B,C	•	•	35
Conspec - Kansas City , KS - (877) 416-3439					
Spec-Bond 100	2	B,C		•	40
Dayton Superior Chemical Division - Kansas City, KS - (877) 416-3439					
SureAnchor J50 -- <i>new listing</i>	3	B,C	•	•	40
SureAnchor I J51	3	B,C	•	•	40
Hilti USA - Tulsa, OK - (866) 445-8827					
HIT-RE 500-SD Epoxy Anchoring	2,3	A,B,C	•		41
HTE 50 Transportation Epoxy	3	A,B,C	•	•	35
ITW Ramset/Redhead - Wood Dale, IL - (800) 899-7890					
EPCON C6 Fast Curing Epoxy	3	A,B,C	•		40
G5 Epoxy Adhesive	3	C	•	N/A	70
Kaufman Products, Inc. - Baltimore, MD - (800) 637-6372 - www.kaufmanproducts.net					
SurePoxy 116	3	B,C		•	40
SurePoxy 117	3	C	•	•	60
SurePoxy HM	2	C	•	•	65
SurePoxy HM, Class B	2	B		•	40
SurePoxy HM, Gel	3	C		•	65
SurePoxy LM, Gel	3	C		•	65
Loctite - Rocky Hill, CT - (860) 571-2657 - www.henkelna.com					
Fixmaster Anchor Bolt Grout HP	3	B,C	•	•	35
Powers Fasteners, Inc. - Brewster, NY - (914) 235-6300					
AC50 Silver	3	A,B	•		32
AC100+ Gold	3	A,B	•		23
PE1000+	3	B,C	•		41
Pure50+	3	B,C	•		50
Pure110+	3	B,C	•		50
T308+ Epoxy	3	C	•		40
Simpson Strong-Tie - Columbus, OH - (614) 876-8060					
EDOT	3	C	•	•	40
ET Epoxy-Tie Adhesive	3	B,C	•		40
SET High Strength Epoxy	3	B,C	•		40

Unitex - Kansas, MO - (800) 821-5846					
Pro-Poxy 300	3	B,C	•	•	40
Pro-Poxy 300 Fast	3	A,B,C	•	•	40

Product Name	Grade [1]	Class [2]	Cartridges	Bulk Containers	Minimum Temp.(°F)
Wej-it Fastening Systems - Tulsa, OK - (800) 343-1264					
Inject-TITE Standard Set Formula	3	B,C	•		40
Inject-TITE Fast-Set Formula	3	B,C	•		40

METHYL METHACRYLATE (MMA) ANCHORING MATERIALS Meeting the physical property requirements of AASHTO M235, Type IV except for epoxy content, see each product for Grade and Class information					
Simpson Strong-Tie - Columbus, OH - (614) 876-8060					
Acrylic-Tie Adhesive	3	A,B,C	•		0

EPOXY ACRYLATE ANCHORING MATERIALS Meeting the physical property requirements of AASHTO M235, Type IV except for epoxy content, see each product for Grade and Class information					
Dayton Superior Chemical Division - Kansas City, KS - (877) 416-3439					
All Weather J51AW -- <i>new listing</i>	3	A,B,C	•	•	-15
Hilti USA - Tulsa, OK - (866) 445-8827					
HIT-ICE Cold Weather Adhesive	N/A	N/A	•		-10
Powers Fasteners, Inc. - Brewster, NY - (914) 235-6300					
AC100+ Gold	3	A,B	•		-4
Unitex - Kansas, MO - (800) 821-5846					
Pro-Poxy 400	3	A,B,C	•	•	-15
Wej-it Fastening Systems - Tulsa, OK - (800) 343-1264					
Inject-TITE AWF All-Weather	3	A,B,C	•		-15

VINYLESTER & POLYESTER-STYRENE ANCHORING MATERIALS These products may meet certain requirements of AASHTO M235, but not all					
Adhesives Technology Corp - Pompano Beach, FL - (800) 892-1880					
UltraBond RT66	3	A,B,C	•	N/A	25
UltraBond Speed Set 2	3	A,B,C	•	N/A	25
Kelken Construction Systems - Parlin, NJ - (732) 721-0249					
Keligrout	N/A	N/A		•	10*
Keligrout 101-P	N/A	N/A	•		10*
Simpson Strong-Tie - Columbus, OH - (614) 876-8060					
VGC Vinylester Glass Capsule	N/A	N/A			25

HYBRID URETHANE METHYACRYLATE RESIN, HARDENER, CEMENT, AND WATER These products do not meet the requirements of AASHTO M235					
HIT HY 150 MAX	N/A	N/A	•		14

*may be used in freezing conditions down to 10°F by keeping resin warm (70-90°F) immediately prior to use.

[1] Grade 2: medium viscosity, Grade 3: non-sagging consistency

[2] Class A: for use below 40°F, Class B: for use between 40°F and 60°F, Class C: for use above 60°F

Type 1 - Anchor bolts size M24 (1") or greater

Type 2 - Anchor bolts smaller than M24 (1")

Type 3 - Reinforcing steel anchors

The products listed above may be used for **Types 2 & 3 anchors**. For **Type 1 anchors** contact the Product Evaluation Coordinator at 207-624-3268 or the Bridge Program at 207-624-3490.

NOTE: These products are not to be used for any overhead sustained tension applications. Any sustained tension in non-overhead applications will require pull-out and creep testing according to the Epoxy Anchoring Adhesives Product Acceptance Criteria (see link below). All anchoring adhesives require yearly re-certification by the manufacturer in order to ensure that product names and formulations have remained the same since the product was originally placed on this list and that products are still current and in production. Failure to comply may result in removal from the Qualified Products List.

DIRECTIONS FOR SELECTING ANCHORING PRODUCTS

ALL REINFORCING AND ANCHORS

Proof load testing may be done when any of the following concerns arise:

1. The quality of the installation may not be adequate.
2. The available concrete thickness is not adequate to provide unconfined pullout strength equal to the yield of the anchor.
3. The condition of the concrete is deteriorated, spalled, or cracked.
4. The load requirements for pullout (not shear) are structurally critical.

The following information will be provided on the plans, or in the specifications:

1. Anchor size
2. Anchor spacing and layout
3. Anchor type
4. Unconfined pullout requirement
5. Minimum anchor embedment depth

If this information is not in the contract documents, contact the Bridge Program for this information.

TYPE 2 AND TYPE 3 REINFORCING STEEL < M24 (#8), ANCHORS < M24 (1")

Any product on the Qualified Products List may be used as long as there is adequate embedment to develop the specified unconfined pullout. The actual depth required varies between products but may not be less than the minimum depth specified on the plans.

The minimum anchor embedment provided in the contract document is based on the depth required to prevent failure of the existing concrete, not the requirements of the anchoring material. Minimum embedment specified is usually based on the assumption that the existing concrete strength is < 3000 psi, and that there is less than 1/2" of deteriorated concrete on the surface. If the concrete appears to be soft, poor, or there is significantly more than 1/2" of deteriorated concrete, check with the Bridge Program to make sure the conditions are accounted for.

TYPE 1 REINFORCING STEEL > M24 (#9), ANCHORS > M24 (1")

Anchoring material shall be selected from the Qualified Products List and approved by Transportation Research and the Bridge Program.

1 mm = 0.04 inch
1 kN = .225 K

Product references in MaineDOT's Standard Specifications:

SECTION 503 - REINFORCING STEEL

503.06 Placing & Fastening When specified on the contract plans, reinforcing steel shall be anchored into drilled holes. The anchoring material shall be one of the products listed on the Maine Department of Transportation's list of Prequalified Type 3 Anchoring Materials. Installation shall be in accordance with the manufacturer's published recommendations.

SECTION 523 – BEARINGS

523.09.1 Anchor Rods The contractor shall drill the holes and set the anchor rods with an Anchoring Material from the Department's Pre-qualified List. The anchor rods shall be accurately set with an approved two part high-strength epoxy mortar. The epoxy mortar shall completely fill the holes. Anchor bolts shall be capable of developing unconfined pullout strength of 120 kN and 280 kN (30 kips and 70 kips) for M24 and M36 (1 in and 1 ½ in) anchor bolts respectively. The Department reserves the right to perform in-place pullout tests. Bolts failing to meet the pullout strength requirements shall be replaced at the Contractor's expense.

PLEASE NOTE: Products often times may have multiple uses. Products appearing on this particular list are expressly pre-qualified for this category of usage only. Do not use these products for any other application unless this product is noted on other lists.

Sales Representatives seeking inclusion of their products on this list:

Please see the Department's [Epoxy Anchoring Adhesives Product Acceptance Criteria](#) for all epoxy-based material. All other chemical anchors such as methyl methacrylate, polyester resin, and hybrid products will be reviewed for admission to the Qualified Products List (QPL) on a case-by-case basis.

If you are experiencing difficulties reading or printing this page, or any page on the Qualified Products List website, please contact the Product Evaluation Coordinator at 207-624-3268.

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